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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,053	08/19/2004	Yasuhiro Umekage	29288.4617	5052
20322	7590	11/10/2004	EXAMINER	
SNELL & WILMER ONE ARIZONA CENTER 400 EAST VAN BUREN PHOENIX, AZ 850040001			MACK, COREY D	
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/711,053

**Applicant(s)**

UMEKAGE ET AL.

**Examiner**

Corey D. Mack

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/019,418.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/19/04, 9/27/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because of the use of the phrase “For the purpose of solving the above problems, the present invention includes:”. Correction is required.

See MPEP § 608.01(b).

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: ULTRASONIC FLOWMETER INCLUDING STABLE FLOW RATE CALCULATION MEANS BASED ON INSTANTANEOUS FLOW RATE--

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 4, 6-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Freund, et al. (US 5,983,730).

A. With respect to Claims 1 and 10, Freund, et al. (US 5,983,730) discloses a flowmeter comprising: instantaneous flow rate detection means for detecting an instantaneous flow rate of fluid by using ultrasonic waves (column 5, lines 1-56); filter processing means for removing a pulse flow rate component of the instantaneous flow rate of the fluid by digital filter processing the instantaneous flow rate of the fluid which is detected by the instantaneous flow rate detection

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means (column 5, line 1 – column 6, line 26); and, stable flow rate calculation means for calculating a stable flow rate of the fluid by based on an output from the filter processing means (column 3, line 52 – column 4, line 53).

B. With respect to Claim 4, Freund discloses that the filter processing means modifies a filter characteristic according to a variation amplitude of the instantaneous flow rate of the fluid (column 5, line 1 – column 6, line 26).

C. With respect to Claim 6, Freund discloses that the filter processing means modifies a filter characteristic according to the flow rate of the fluid (column 5, line 57 – column 6, line 26).

D. With respect to Claim 7, Freund discloses that the filter processing means modifies a filter characteristic according to an interval of measurement times of the instantaneous flow rate detection means (column 6, line 60 – column 7, line 14).

E. With respect to Claim 8, Freund discloses that when the flow rate is high, the filter processing means modifies a filter characteristic such that a cut-off frequency of the filter characteristic becomes high, and when the flow rate is low, the filter processing means modifies the filter such that the cut-off frequency of the filter characteristic becomes low (moving window) (column 5, lines 18-56).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 2, 3, 5, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freund, et al. (US 5,983,730) in view of Herzl (US 3,709,034).

A. With respect to Claim 2, Freund discloses the claimed invention, except they do not explicitly disclose fluctuation determination means. Herzl (US 3,709,034) discloses a flowmeter including fluctuation determination means (Fig. 1) for determining whether or not the instantaneous flow rate of the fluid pulses or not, wherein the fluctuation determination means determines that the instantaneous flow rate of the fluid pulses, and outputs a signal to calculate a stable flow rate of the fluid (column 4, lines 6-52). Therefore, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to include in Freund a fluctuation determination means in order to calculate a stable flow rate of the fluid.

B. With respect to Claim 3, Herzl discloses that the fluctuation determination means determines whether the instantaneous flow rate of the fluid pulses or not, by determining whether or not a variation amplitude of the instantaneous flow rate of the fluid is equal to or greater than a predetermined value (column 4, lines 18-52).

C. With respect to Claim 5, Herzl discloses that when the flow rate of the fluid is detected by the flow rate detection means is lower than a predetermined flow rate, the filter processing means removes a pulse component of the instantaneous flow rate of the fluid (column 4, line 53 – column 5, line 36).

D. With respect to Claim 9, Herzl discloses that the filter processing means modifies a filter characteristic such that a variation amplitude of the stable flow rate calculated by the stable flow rate calculation means is within a predetermined value range (column 3, line 52 – column 4, line 53).

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E. With respect to Claim 11, Herzl (US 3,709,034) discloses that the instantaneous flow rate detection means detects the flow rate by using heat 11 (column 3, lines 39-51).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey D. Mack whose telephone number is (571) 272-2181. The examiner can normally be reached on M-F, 8:30-4:30.

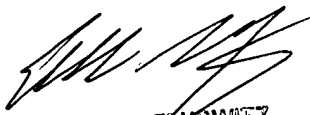
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Corey D. Mack, Esq.  
Patent Examiner  
Art Unit 2855

November 4, 2004



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